对某些原子的基态能量和相互作用之间的联系的猜测

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摘要：某些原子的基态能量可以用公式表示出来，并且与实验的测量值近似。并且这个结果表明，原子的基态能量和相互作用的耦合常数有关系。

关键词：原子序数，基态能量，相互作用，耦合常数。

我们知道氢原子的基态能量可以用这个公式表示，$\frac{(h)(R_\infty)(c)}{(e_o)}$，然后我发现，又可以表示为，$\frac{(h)(R_\infty)(c)}{(e_o)} = (R_\infty)(\mu_o)$ 。氦原子的基态能量可以用这个公式表示，$\frac{(h)(R_\infty)(c)}{(e_o)} * \frac{(g_z)^2}{(g_e)^2}$， 或者，$\frac{(R_\infty)^2(m_e)(g_z)}{(e_o)2\pi}$ ，或者，$\frac{(R_\infty)^2(m_e)[\alpha_o]2\pi}{(e_o)(g_w)^2}$ ，或者，$\frac{(R_\infty)^2(c)^2(m_e)2\pi}{(g_w)(g_s)}$ 。然后我想说，这个$\frac{(R_\infty)^2(c)^2(m_e)2\pi}{(g_w)(g_s)}$是错的，应该改成，$\frac{(R_\infty)^2(c)^2(m_e)(g_s)(g_z)}{2\pi(g_w)(g_e)^3}$。因为这个$(g_s)$之前是孤立证据，是和前面几个公式证据联系但是不自洽的，而改正后的这个，是和我下面将要讲到的其它原子的基态能量能用公式表示的证据联系在一起的。也就是说，从这里可以得到强相互作用的耦合常数的公式。

那为什么又说前面那个错了呢，就没有可能前面那个是这个的另一种形式么。因为前面如果是对的，它们联立起来，最后会得到这么一个结果，$(g_s)^2 = (g_e)(g_w)^2 4\pi$ ，$(e_o)(c)^2 2\pi^3 = 1$。 而这个结果最后会有这个结论，$(g_e)\pi = 1$， $4\pi^3[\alpha_o] = 1$。这个怎么看怎么觉得奇怪，所以我就直接扔掉了，如果有谁觉得这个方向还可以继续下去，欢迎继续填坑。

然后前两天，无聊翻那个元素的电离能表，我就在想，那是不是所有原子的基态能量都可以用公式表示呢，会不会都和相互作用有关系。然后我试了几个发现，好像都可以，也都和相互作用有关系，然后还发现了相互作用的耦合常数之间的联系。

比如，
$$\begin{cases} 1, (e_o)(c)^2(g_s) = (g_w)(g_e)^3 \ , \\ 2, (g_s)^2(g_e) = (g_w)(g_z) \ , \\ 3, (g_z)^2(g_s) = (g_w) \ , \\ 4, (g_s)(g_e) = (g_z)^3 \end{cases}$$
而这些联系是从下面发现的。

以下的$[H_1]$的下标为原子序数，$[H_1]$表示为原子的基态能量。

氢原子$[H_1]$和氦原子$[H_2]$的基态能量就可以表示为$\frac{[H_1]}{[H_2]}*\frac{(g_z)^2}{(g_e)^2} \approx 1$，或者，$\frac{[H_1]}{[H_2]}*\frac{(g_s)^4}{(g_w)^2} \approx 1$，

氦原子$[H_2]$和锂原子$[H_3]$的基态能量就可以表示为$\frac{[H_2]}{[H_3]}*\frac{(g_z)}{(g_e)} \approx 1$，

锂原子$[H_3]$和铍原子$[H_4]$的基态能量就可以表示为$\frac{[H_3]}{[H_4]}*\frac{(g_w)}{(g_e)} \approx 1$，

铍原子$[H_4]$和硼原子$[H_5]$的基态能量就可以表示为$\frac{[H_4]}{[H_5]}*\frac{(g_z)^2}{(g_e)} \approx 1$，或者，$\frac{[H_4]}{[H_5]}*\frac{(g_s)}{(g_z)} \approx 1$，

硼原子$[H_5]$和碳原子$[H_6]$的基态能量就可以表示为$\frac{[H_5]}{[H_6]}*\frac{(g_s)^2}{1} \approx 1$，

碳原子$[H_6]$和氮原子$[H_7]$的基态能量就可以表示为$\frac{[H_6]}{[H_7]}*\frac{(g_w)(g_z)}{(g_e)} \approx 1$，

氮原子$[H_7]$和氧原子$[H_8]$的基态能量就可以表示为$\frac{[H_7]}{[H_8]}*\frac{1}{(g_z)} \approx 1$，

氧原子$[H_8]$和氟原子$[H_9]$的基态能量就可以表示为$\frac{[H_8]}{[H_9]}*\frac{1}{(g_z)} \approx 1$，

氟原子$[H_9]$和氖原子$[H_{10}]$的基态能量就可以表示为$\frac{[H_9]}{[H_{10}]}*\frac{(g_s)}{1} \approx 1$，

氢原子$[H_1]$和和镓原子$[H_{31}]$的基态能量就可以表示为$\frac{[H_1]}{[H_{31}]}*\frac{1}{(g_z)^3(g_e)} \approx 1$，

锌原子$[H_{30}]$和镓原子$[H_{31}]$的基态能量就可以表示为$\frac{[H_{30}]}{[H_{31}]}*\frac{[\alpha_0]}{(g_z)^2} \approx 1$，

镓原子$[H_{31}]$和锗原子$[H_{32}]$的基态能量就可以表示为$\frac{[H_{31}]}{[H_{32}]}*\frac{1}{(g_w)} \approx 1$，

氢原子$[H_1]$和和金原子$[H_{79}]$的基态能量就可以表示为$\frac{[H_1]}{[H_{79}]}*\frac{1}{(g_w)(g_z)} \approx 1$，

铂原子$[H_{78}]$和金原子$[H_{79}]$的基态能量就可以表示为$\frac{[H_{78}]}{[H_{79}]}*\frac{(g_w)(g_s)}{(g_z)} \approx 1$，

金原子$[H_{79}]$和汞原子$[H_{80}]$的基态能量就可以表示为$\frac{[H_{79}]}{[H_{80}]}*\frac{1}{(g_w)(g_z)} \approx 1$。

上面为什么只有一部分，因为我感觉写着太麻烦了，不想弄了，其他的原子，有爱好者，可以自己尝试一下，我感觉原子的基态能量和相互作用的耦合常数的关系，大概也就这样了。

另外，在这个过程中我发现，氢原子$[H^1]$和氘原子$[H^2]$的静止质量可以表示为$\frac{[H^1]}{[H^2]} * \frac{(g_z)(g_w)}{(g_e)^2(g_s)} \approx 1$，或者，$\frac{[H^1]}{[H^2]} * \frac{(g_s)}{(g_e)} \approx 1$。

它们联系在一起，就可以有，$\frac{[H_1]}{[H_2]} * \frac{[H^2]}{[H^1]} * \frac{(g_z)(g_s)}{(g_w)} \approx 1$，或者，$\frac{[H_1]}{[H_2]} * \frac{[H^2]}{[H^1]} * \frac{1}{(g_z)} \approx 1$，或者，$\frac{[H_1]}{[H_2]} * \frac{[H^1]}{[H^2]} * \frac{(g_z)(g_s)}{(g_w)^2(g_e)^2} \approx 1$，而这些和上面的 “约等式”都是自洽的。

然后我又想到有氢原子质量的公式，

$$
\begin{cases}
1, \frac{1}{2}(m_e)[\alpha_o]^2(c)^2 = \frac{(m_{atom})(c)^2}{2\pi(R_\infty)} , \\
2, \frac{(m_{atom})(c)^2}{(r_{atom})} = \frac{[\alpha_o](c)(r_e)(2\pi)^4}{(a_0)} , \\
3, \frac{(m_{atom})(G_N)}{(a_0)^2} = (2\pi)^3(e_o) ,
\end{cases}
$$

以及含有物理常数的公式，

$$
\begin{cases}
1, \frac{(m_e)(R_\infty)(G_N)}{(a_0)} = 2\pi(m_e)[\alpha_o](c) , \\
2, \frac{(e_o)(R_\infty)}{4\pi(\varepsilon_0)(a_0)} = (c) , \\
3, \frac{1}{2}(m_e)[\alpha_o]^2(c)^2 = \frac{(m_{atom})(c)^2}{2\pi(R_\infty)} , \\
4, \frac{(e_o)^2(R_\infty)}{4\pi(\varepsilon_0)(a_0)} = \frac{(m_e)(R_\infty)(G_N)}{(K_B)} , \\
5, 2\pi(\mu_B)(m_e) = (m_e)(R_\infty)^2(G_N) * (m_e)(R_\infty)^2(G_N) , \\
6, \frac{(m_{atom})(c)^2}{(r_{atom})} = \frac{[\alpha_o](c)(r_e)(2\pi)^4}{(a_0)} , \\
7, \frac{(e_o)}{2(r_{atom})} = (R_\infty)^3(a_0)^3(2)^3(2\pi)^6 , \\
8, \frac{(m_e)[\alpha_o]^2(c)^2}{2(r_e)} = (c)2(r_{atom})(2\pi)^4 , \\
9, \frac{(m_{atom})(G_N)}{(a_0)^2} = (2\pi)^3(e_o) ,
\end{cases}
$$

那么，原子序数，基态能量，相互作用，耦合常数，静止质量，物理常数，它们就可以联系在一起了，然后这里还少了一个“数学结构”把它们“统筹”起来。这个就像炒菜一样，配菜我都准备好了，就差一位主厨来炒了。至于我自己，最近正在学炒菜，现在我把这个发到网上，就看有没人先把它炒出来，或者，等我神功大成，自己把它炒出来。

参考文献：http://zh.wikipedia.org/w/index.php?title=电离能表&oldid=68629437。

For some atomic ground state energy and the connection between the interaction of speculation

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Abstract: Some of the ground-state energy of the atom can be expressed in formulas, and with the experimental measurements of approximation. And the results show that the ground-state energy of the atoms and the interaction coupling constant.

Key words: Atomic number, the ground state energy, interaction, the coupling constant.

We know that the ground-state energy of the hydrogen atoms can use this formula said, $\frac{(h)(R_\infty)(c)}{(e_o)}$,Then I found that can be represented as, $\frac{(h)(R_\infty)(c)}{(e_o)} = (R_\infty)(\mu_o)$ .The ground-state energy of the helium atoms can be expressed with this formula, $\frac{(h)(R_\infty)(c)}{(e_o)} * \frac{(g_z)^2}{(g_e)^2}$, or, $\frac{(R_\infty)^2(m_e)(g_z)}{(e_o)2\pi}$, or, $\frac{(R_\infty)^2(m_e)[\alpha_o]2\pi}{(e_o)(g_w)^2}$, or, $\frac{(R_\infty)^2(c)^2(m_e)2\pi}{(g_w)(g_s)}$ .Then I want to say this $\frac{(R_\infty)^2(c)^2(m_e)2\pi}{(g_w)(g_s)}$ is wrong, , It should be changed to, $\frac{(R_\infty)^2(c)^2(m_e)(g_s)(g_z)}{2\pi(g_w)(g_e)^3}$ .Because the evidence before (g_s) was isolated, is contact with several formulas in front of the evidence but not self consistent, and correct after this, and I will talk about the following the ground-state energy of the other atoms can use formula said evidence linked together. That is to say, from here can get strong interaction coupling constant formula.

Why front that is wrong and he said, could not the preceding is another form of this? Because if it is right in front, they are simultaneous, finally to get such a result, $(g_s)^2 = (g_e)(g_w)^2 4\pi$, $(e_o)(c)^2 2\pi^3 = 1$. And this result will have the final conclusion, $(g_e)\pi = 1$, $4\pi^3[\alpha_o] = 1$. This how to see how to feel strange, so I just threw away directly, if anyone think this direction will also continue, welcome to continue filling holes.

Then, two days ago I bored over the elements of the ionization energy table, I just think, if it is all the ground-state energy of the atom can be expressed in formula, will have a connection and interaction. Then I tried several discoveries, as can be, and also have a connection and interaction, and then found the connection between the interaction coupling constant.

For instance, $\left\{\begin{array}{l} 1, (e_o)(c)^2(g_s) = (g_w)(g_e)^3 \ , \\ 2, (g_s)^2(g_e) = (g_w)(g_z) \ , \\ 3, (g_z)^2(g_s) = (g_w) \ , \\ 4, (g_s)(g_e) = (g_z)^3 \end{array}\right.$ And these links found from the bottom.

The following $[H_1]$ subscript as the atomic number, $[H_1]$ is expressed as the ground state energy of the atom.

Hydrogen atoms $[H_1]$ and the ground-state energy of the helium atoms $[H_2]$ can be represented as $\frac{[H_1]}{[H_2]} * \frac{(g_z)^2}{(g_e)^2} \approx 1$, or, $\frac{[H_1]}{[H_2]} * \frac{(g_s)^4}{(g_w)^2} \approx 1$,

Helium atoms $[H_2]$ and the ground-state energy of the lithium atoms $[H_3]$ can be represented as $\frac{[H_2]}{[H_3]} * \frac{(g_z)}{(g_e)} \approx 1$,

Lithium atoms $[H_3]$ and the ground-state energy of the beryllium atoms $[H_4]$ can be represented as $\frac{[H_3]}{[H_4]} * \frac{(g_w)}{(g_e)} \approx 1$,

Beryllium atoms $[H_4]$ and the ground-state energy of the boron atoms $[H_5]$ can be represented as $\frac{[H_4]}{[H_5]} * \frac{(g_z)^2}{(g_e)} \approx 1$, or, $\frac{[H_4]}{[H_5]} * \frac{(g_s)}{(g_z)} \approx 1$,

Boron atoms $[H_5]$ and the ground-state energy of the carbon atoms $[H_6]$ can be represented as $\frac{[H_5]}{[H_6]} * \frac{(g_s)^2}{1} \approx 1$,

Carbon atoms $[H_6]$ and the ground-state energy of the nitrogen atoms $[H_7]$ can be represented as $\frac{[H_6]}{[H_7]} * \frac{(g_w)(g_z)}{(g_e)} \approx 1$,

Nitrogen atoms $[H_7]$ and the ground-state energy of the oxygen atoms $[H_8]$ can be represented as $\frac{[H_7]}{[H_8]} * \frac{1}{(g_z)} \approx 1$,

Oxygen atoms $[H_8]$ and the ground-state energy of the fluorine atoms $[H_9]$ can be represented as $\frac{[H_8]}{[H_9]} * \frac{1}{(g_z)} \approx 1$,

Fluorine atoms $[H_9]$ and the ground-state energy of the neon atoms $[H_{10}]$ can be represented as $\frac{[H_9]}{[H_{10}]} * \frac{(g_s)}{1} \approx 1$,

Hydrogen atoms $[H_1]$ and the ground-state energy of the gallium atoms $[H_{31}]$ can be represented as $\frac{[H_1]}{[H_{31}]} * \frac{1}{(g_z)^3(g_e)} \approx 1$,

Zinc atoms $[H_{30}]$ and the ground-state energy of the gallium atoms $[H_{31}]$ can be represented as $\frac{[H_{30}]}{[H_{31}]} * \frac{[\alpha_o]}{(g_z)^2} \approx 1$,

Gallium atoms $[H_{31}]$ and the ground-state energy of the germanium atoms $[H_{32}]$ can be represented as $\frac{[H_{31}]}{[H_{32}]} * \frac{1}{(g_w)} \approx 1$,

Hydrogen atoms $[H_1]$ and the ground-state energy of the gold atoms $[H_{79}]$ can be represented as $\frac{[H_1]}{[H_{79}]} * \frac{1}{(g_w)(g_z)} \approx 1$,

Platinum atoms $[H_{78}]$ and the ground-state energy of the gold atoms $[H_{79}]$ can be represented as $\frac{[H_{78}]}{[H_{79}]} * \frac{(g_w)(g_s)}{(g_z)} \approx 1$,

Gold atoms $[H_{79}]$ and the ground-state energy of the mercury atoms $[H_{80}]$ can be represented as $\frac{[H_{79}]}{[H_{80}]} * \frac{1}{(g_w)(g_z)} \approx 1$.

Why only part of the above, because I feel like writing too much trouble, don't want to get the other atoms, have a lover, can try, I feel the ground-state energy of the atoms and the interaction of the relationship between the coupling constant, probably that's it.

[This is machine translation articles in English, may be some local translation is wrong, because my English is too poor, if the English see you want to vomit, behind have a Chinese, I suggest you translate it again.]

In addition, in the process, I found that hydrogen $[H^1]$ and helium atom $[H^2]$ rest mass can be expressed as $* \frac{(g_z)(g_w)}{(g_e)^2(g_s)} \approx 1$, or, $\frac{[H^1]}{[H^2]} * \frac{(g_s)}{(g_e)} \approx 1$.

Them together, can have, $\frac{[H_1]}{[H_2]} * \frac{[H^2]}{[H^1]} * \frac{(g_z)(g_s)}{(g_w)} \approx 1$, or, $\frac{[H_1]}{[H_2]} * \frac{[H^2]}{[H^1]} * \frac{1}{(g_z)} \approx 1$, or, $\frac{[H_1]}{[H_2]} * \frac{[H^1]}{[H^2]} * \frac{(g_z)(g_s)}{(g_w)^2(g_e)^2} \approx 1$, and these and the above "about equation" are self consistent.

Then I think there are hydrogen quality formula ,

$$\begin{cases} 1, \frac{1}{2}(m_e)[\alpha_o]^2(c)^2 = \frac{(m_{atom})(c)^2}{2\pi(R_\infty)} , \\ 2, \frac{(m_{atom})(c)^2}{(r_{atom})} = \frac{[\alpha_o](c)(r_e)(2\pi)^4}{(a_0)} , \\ 3, \frac{(m_{atom})(G_N)}{(a_0)^2} = (2\pi)^3(e_o) , \end{cases}$$

And it has a physical constants formula,

$$
\begin{cases}
1,\dfrac{(m_e)(R_\infty)(G_N)}{(a_0)} = 2\pi(m_e)[\alpha_o](c)\ , \\
2,\dfrac{(e_o)(R_\infty)}{4\pi(\varepsilon_0)(a_0)} = (c)\ , \\
3,\dfrac{1}{2}(m_e)[\alpha_o]^2(c)^2 = \dfrac{(m_{atom})(c)^2}{2\pi(R_\infty)}\ , \\
4,\dfrac{(e_o)^2(R_\infty)}{4\pi(\varepsilon_0)(a_0)} = \dfrac{(m_e)(R_\infty)(G_N)}{(K_B)}\ , \\
5,2\pi(\mu_B)(m_e) = (m_e)(R_\infty)^2(G_N) * (m_e)(R_\infty)^2(G_N)\ , \\
6,\dfrac{(m_{atom})(c)^2}{(r_{atom})} = \dfrac{[\alpha_o](c)(r_e)(2\pi)^4}{(a_0)}\ , \\
7,\dfrac{(e_o)}{2(r_{atom})} = (R_\infty)^3(a_0)^3(2)^3(2\pi)^6\ , \\
8,\dfrac{(m_e)[\alpha_o]^2(c)^2}{2(r_e)} = (c)2(r_{atom})(2\pi)^4\ , \\
9,\dfrac{(m_{atom})(G_N)}{(a_0)^2} = (2\pi)^3(e_o)\ ,
\end{cases}
$$

And the standard model of particle physics particle rest mass "equation",

$$\frac{(m_W)}{(m_h)} \approx (g_w)\ ,\ \frac{(m_Z)}{(m_h)} \approx (g_z)\ ,\ \frac{(m_c)}{(m_t)} \approx [\alpha_o]\ ,\ \frac{(m_c)}{(m_s)} \approx \frac{2\pi}{(g_w)(g_z)} \approx \frac{(g_w)}{[\alpha_o]2\pi}\ ,$$

$$\frac{(m_b)}{(m_\tau)} \approx 2\pi(g_e)(g_s)\ ,\ \frac{(m_U)}{(m_e)} \approx (g_z)2\pi\ ,\ \frac{(m_\tau)}{(m_\mu)} \approx \frac{(g_s)(g_w)}{[\alpha_o]2\pi}\ ,$$

$$\frac{(m_s)}{(m_e)} \approx \frac{(g_s)(g_z)}{(g_w)[\alpha_o]}\ ,\ \frac{(m_\mu)}{(m_e)} \approx \frac{(g_z)(g_w)}{(g_e)[\alpha_o]}\ ,\ \frac{(m_Z)}{(m_\tau)} \approx \frac{(g_z)(g_w)}{(g_s)[\alpha_o]}\ ,\ \frac{(m_d)}{(m_e)} \approx \frac{(g_w)(g_e)^2}{[\alpha_o]}\ .$$

So, atomic number, the ground state energy, the interaction and coupling constants, static quality, physical constants, they can contact together, then here is less a "mathematical structure" them "as a whole". This, like cooking, dishes are ready, I will sent a chef. As for myself, recently is learning cooking, now I have it posted online, see have no one to fry it, or, wait me alkaloids in dacheng, fry it out myself.

Reference: http://zh.wikipedia.org/w/index.php?title=电离能表&oldid=68629437 .